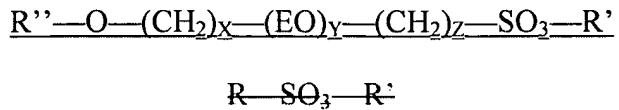
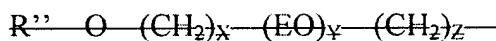


### Listing of Claims

Claim 1 (Currently Amended): A conductive polymer colloidal composition comprising: a polymer, and a dopant having the following general formula:



where  $\text{R}$  is an alkyl having from two to twelve carbon atoms, unbranched or branched; an alkenyl having from three to twelve carbon atoms, unbranched or branched; a fatty acid chain of from ten to twenty carbon atoms, saturated or unsaturated; an aryl radical, unsubstituted or substituted with two to three methyl groups, a saturated or unsaturated chain of three to twenty carbon atoms, a sulfonic acid group or salt thereof, hydroxyl group, a carboxyl group or styrene group; a naphthalene group, unsubstituted or substituted with a sulfonic acid group or a salt thereof; an anthracene group unsubstituted or substituted with a hydroxyl group or oxo group; a disulfide having from four to six carbon atoms, unsubstituted or substituted with a sulfonate; or a radical having the following general formula:



where  $\text{R}''$  is H, methyl, ethyl, propyl or butyl group;  $x$  is an integer of from 12 to 14;  $y$  is an integer of from 1 to 14; and  $z$  is an integer of from 1 to 5; and

$\text{R}'$  is H, methyl ethyl or M, where M is a cation.

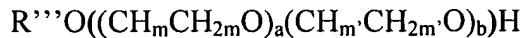
Claim 2 (Canceled)

Claim 3 (Original): The conductive polymer colloidal composition of claim 1, wherein the polymer comprises polypyrrole, polyaniline, polythiophene, polyfuran or mixtures thereof.

Claim 4 (Original): The conductive polymer colloidal composition of claim 1, further comprising conductive colloidal particles of carbon, metals and their salts, or mixtures thereof.

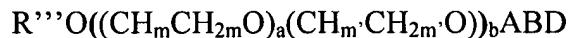
Claim 5 (Original): The conductive polymer colloidal composition of claim 1, further comprising a stabilizer.

Claim 6 (Original): The conductive polymer colloidal composition of claim 5, wherein the stabilizer comprises a non-ionic polyether having the general formula:



where  $R'''$  is a hydrocarbon group having from 1 to 40 carbon atoms,  $m$  and  $m'$  differ from each other and each is one or more integers of from 1 to 4, and  $a$  and  $b$  are integers varying between 0 and 1,000 provided that  $a+b$  is at least 3.

Claim 7 (Original): The conductive polymer colloidal composition of claim 5, wherein the stabilizer comprises a compound having the formula:



where  $R'''$  is a hydrocarbon group having from 1 to 40 carbon atoms,  $m$  and  $m'$  differ from each other and each is one or more integers of from 1 to 4,  $a$  and  $b$  are integers such that there are at least 20 ethoxylate groups in the formula,  $A$  is an anion,  $B$  is a counteracting cation, and  $D$  is an alkyl group of from 1 to 8 carbon atoms.

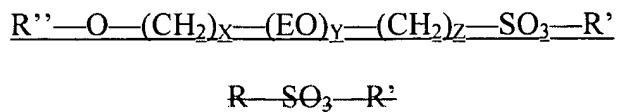
Claim 8 (Original): The conductive polymer colloidal composition of claim 5, wherein the stabilizer comprises a compound having the formula:



where  $m''$  is an integer ranging from 3 to 20,  $G$  is an alkali metal and  $n$  is an integer between 3 and 1000.

Claim 9 (Currently Amended): A method for preparing a conductive polymer colloidal composition comprising:

- a) adding monomers to a dispersant;
- b) adding a dopant to the dispersant comprising the monomers, the dopant having a formula:



~~where  $R$  is an alkyl having from two to twelve carbon atoms, unbranched or branched; an alkenyl having from three to twelve carbon atoms, unbranched or branched; a fatty acid chain of from ten to twenty carbon atoms; an aryl radical, unsubstituted or substituted with two to three methyl groups, a saturated or unsaturated chain or three to~~

~~twenty carbon atoms, a sulfonic acid group or salt thereof, hydroxyl group, a carboxylic acid group or salt thereof or styrene group; a naphthalene group, unsubstituted or substituted with a sulfonic acid group or salt thereof; an anthracene group unsubstituted or substituted with a hydroxyl group or an exo group; a disulfide having from four to six carbon atoms, unsubstituted or substituted with a sulfonic acid group or salt thereof; or a radical having the following formula:~~



where  $R''$  is H, methyl, ethyl, propyl or butyl,  $x$  is an integer of from 12 to 14,  $y$  is an integer of from 1 to 14,  $z$  is an integer of from 1 to 5;  $R'$  is H, methyl, ethyl or  $M$ , where  $M$  is a cation; and

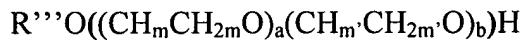
- c) mixing the monomers and dopant to form the conductive polymer colloidal composition.

Claim 10 (Canceled)

Claim 11 (Original): The method of claim 9, further comprising a conductive colloidal particles of carbon, metals and their salts or mixtures thereof.

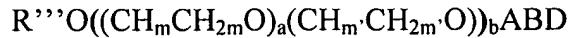
Claim 12 (Original): The method of claim 9, further comprising an oxidant, a preservative, a stabilizer, or mixtures thereof.

Claim 13 (Original): The method of claim 12, wherein the stabilizer comprises a non-ionic polyether having the formula:



where  $R'''$  is a hydrocarbon group having from 1 to 40 carbon atoms,  $m$  and  $m'$  differ from each other and each is one or more integers of from 1 to 4,  $a$  and  $b$  are integers between 0 to 1000 provided that  $a + b$  is at least 3.

Claim 14 (Original): The method of claim 12, wherein the stabilizer comprises a compound having the formula:



where  $R'''$  is a hydrocarbon group having from 1 to 40 carbon atoms,  $m$  and  $m'$  differ from each other and each is one or more integers of from 1 to 4, and  $a$  and  $b$  are integers such that are at least 20 ethoxylate groups in the formula,  $A$  is an anion,  $B$  is a counteracting cation, and  $D$  is an alkyl group having from 1 to 8 carbon atoms.

Claim 15 (Original): The method of claim 12, wherein the stabilizer comprises a compound having the formula:



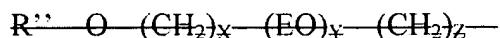
where  $m''$  is an integer ranging from 3 to 20,  $G$  is an alkali metal and  $n$  is an integer from 3 to 1000.

Claim 16 (Currently Amended): A method for plating a surface of a substrate comprising:

- a) contacting the surface of the substrate with a conductive polymer colloidal composition to deposit a conductive polymer layer on the substrate, the conductive polymer colloidal composition comprises a polymer and a dopant, the dopant is a compound having the formula:



~~where  $R$  is an alkyl of from two to twelve carbon atoms, unbranched or branched; an alkenyl of from three to twelve carbon atoms, unbranched or branched; a fatty acid chain of ten to twenty carbon atoms; an aryl radical, unsubstituted or substituted with two to three methyl groups, a saturated or unsaturated chain of three to twenty carbon atoms, a sulfonic acid group or salt thereof, hydroxyl group, a carboxylic acid group or salt thereof, or a styrene group; a naphthalene group, unsubstituted or substituted with a sulfonic acid group or salt thereof; an anthracene group unsubstituted or substituted with a hydroxyl group or an oxo group; a disulfide having from four to six carbon atoms, unsubstituted or substituted with a sulfonic acid group or salt thereof; or a radical having the formula:~~



where R'' is H, methyl, ethyl, propyl or butyl, x is an integer of from 12 to 14, y is an integer of from 1 to 14, and z is an integer of from 1 to 5; R' is H, methyl, ethyl or M, where M is a cation; and

- b) depositing a metal on the conductive polymer layer of the substrate.

Claim 17 (Canceled)

Claim 18 (Currently Amended): The method of ~~claim 17~~claim 16, wherein the conductive polymer colloidal composition further comprises conductive colloidal particles of carbon.

Claim 19 (Original): The method of claim 16, wherein the substrate is a printed wiring board.

Claim 20 (Original): The method of claim 19, wherein the printed wiring board is multi-layered.